



SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 2 AI STAND. I-4DMU 15 MM WIDE, +/-20MA; 13 BIT + SIGN, 4 .. 20MA; 12 BIT FOR 4-WIRE TRANSDUCER CYCLE TIME 65 MS/CHANNEL WITH LED SF (GROUP FAULT)

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V; From power module
Input current	
from load voltage L+ (without load), max.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
Power losses	
Power loss, typ.	0.6 W
Address area	
Address space per module	
• Address space per module, max.	4 byte
Analog inputs	
Number of analog inputs	2
permissible input current for current input (destruction limit), max.	40 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Input ranges	
• Voltage	No
• Current	Yes
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), currents	

• -20 mA to +20 mA	Yes; 50 Ohm
• 4 mA to 20 mA	Yes; 50 Ohm
<b>Cable length</b>	
• shielded, max.	200 m

### Analog value generation for the inputs

Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	14 bit; +/-20 mA: 14 bits, 4 to 20 mA: 13 bits
• Integration time (ms)	16,7 / 20 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
• Conversion time (per channel)	65 ms; 55 / 65 ms
<b>Smoothing of measured values</b>	
• Parameterizable	Yes; In four stages by means of digital filtering
• Step: None	Yes; 1 x cycle time
• Step: low	Yes; 4 x cycle time
• Step: Medium	Yes; 32 x cycle time
• Step: High	Yes; 64 x cycle time

### Encoder

<b>Connection of signal encoders</b>	
• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max.	750 Ω

### Errors/accuracies

Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.05 %
<b>Operational limit in overall temperature range</b>	
• Current, relative to input area, (+/-)	0.6 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to input area, (+/-)	0.4 %
<b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1</math> = interference frequency</b>	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB

### Isochronous mode

Isochronous operation (application synchronized up to terminal)	No
<b>Diagnostic messages</b>	
• Wire break	Yes; Measuring range 4 to 20 mA only

• Group error	Yes
• Overflow/underflow	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes

<b>Parameter</b>	
Remark	4 byte
Diagnosis: wire break	Disable / enable (only in measuring range 4 to 20 mA)
Measurement type/range	deactivated / +/-20 mA / 4 to 20 mA
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable

<b>Potential separation</b>	
<b>Galvanic isolation analog inputs</b>	
• between the channels	No
• between the channels and the backplane bus	Yes
• between the channels and the load voltage L+	No

<b>Isolation</b>	
Isolation checked with	500 V DC

<b>Dimensions</b>	
Width	15 mm
Height	81 mm
Depth	52 mm

<b>Weights</b>	
Weight, approx.	40 g
<b>last modified:</b>	20.04.2015